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Drosophila Myiasis Mimicking Sepsis in a Newborn

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MYIASIS IN THE NEONATAL period is a rare occurrence and almost exclusively found in tropical areas.^{1,2} Its rarity and the clinical presentation of cellulitis and sepsis make the following case report intriguing. The supposed method of infestation and the responsible fly are likewise unique.

Report of a Case

A female neonate whose gestational, intrapartum and postpartum periods were unremarkable was seen by her physician at eight days of age because of increasing jaundice. A total serum bilirubin level of 16 mg per dl (normal up to 1 mg per dl) was found. Swelling and reddening around the right eye were also noted. During the following 24 hours, periorbital induration became severe and pustules appeared (Figure 1). Other pustules were noted in and behind the ears, on the cheeks, the palms of the hands and around the umbilicus. No pustules were found on the back or in the diaper area. Because of the history and physical findings, she was referred for evaluation and treatment of suspected sepsis.

On admission physical examination the infant was slightly irritable and was not in a toxic state. She weighed 2,700 grams, temperature was 36.0°C (96.8°F), respirations were 35 and pulse rate 140 per minute. In addition to the pustules and cellulitis there was mild omphalitis. The baby was noted to have a soft fontanelle, no hepatosplenomegaly, no bone or joint tenderness



Figure 1.—Photograph of an eight-day-old infant with periorbital cellulitis with pustules.

and a normal cardiorespiratory system. Cultures were obtained of blood, urine, cerebrospinal fluid and specimens from several pustules. Intravenous administration of ampicillin (150 mg per kg of body weight a day) and gentamicin sulfate (7.5 mg per kg a day) was begun. Gram stain of material from several pustules showed numerous polymorphonuclear leukocytes but no organisms. A complete blood count showed a hematocrit determination of 51 ml per dl and a leukocyte count of 15,800 per cu mm that differentiated to 2 percent band forms, 65 percent segmented forms, 4 percent eosinophils, 28 percent lymphocytes and 1 percent monocytes. Urine analysis and serum electrolyte and blood urea nitrogen levels were normal. Serum bilirubin level was 15.5 mg per dl total with a direct component of 0.6 mg per dl. Red blood cell morphology was normal, Coombs' test was negative and the reticulocyte count was 0.9 percent.

Within six hours after admission to hospital, movement was noted in the pustules. During the next two hours, 46 white larvae 3 to 4 mm long bored out of the pustules. These were collected and identified morphologically and by hatching as *Drosophila* larvae. As soon as all larvae were out of the epidermis, the cellulitis rapidly resolved and the pustules healed with no scarring. The hyperbilirubinemia dropped precipitously to 10 mg per dl over the first ten hours of hospital stay. X-ray films of the periorbital area showed no pathologic condition. All cultures were negative for pathogens at 48 hours and antibiotic medications were stopped.

Retrospectively, it was learned that the mother

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had spent a few days canning fruit and many fruit flies (*Drosophila*) had been in the house. The baby had received frequent attention during the canning process, with probable transfer of fruit juices to the exposed skin. The attraction of *Drosophila* to these fruit juices on the immunologically immature neonate's skin appeared to be the cause of the myiasis.³

The baby was discharged in good health after four days in hospital.

Discussion

An article discussing common methods of infestation with dipterous fly larvae has recently been published.⁴ Topical infestation of ulcerated skin, ear canals and nostrils is well known. Some flies puncture the skin and deposit ova beneath the surface, while some lay their ova on the surface, which then hatch and burrow along hair follicles or directly through the skin. Other flies use insect vectors.²

The most common larvae causing myiasis in North America are the screwworm (*Cochliomyia hominivorax*), common cattle grub (*Hypoderma lineatum*), sarcophagid fly (*Wohlfahrtia vigil*), house fly (*Musca domestica*) and rabbit box fly (*Cuterebra cuniculi*).⁵ *Drosophila* was not listed as a cause of dermal myiasis in the texts and articles reviewed. Myiasis in the neonate is not found in the medical literature of North America but is found in that of tropical areas of the world. The usual sites of infestation are the umbilical cord and foreskin.^{1,2}

Summary

The presentation of an eight-day-old neonate with periorbital cellulitis, cutaneous pustules and hyperbilirubinemia normally signals sepsis. In this case the cause of the hyperbilirubinemia was not discovered and the problem rapidly resolved over the first ten hours of stay in hospital with increased fluid intake. The cellulitis and pustules proved to be due to *Drosophila* larvae infestation, a heretofore unlisted cause of myiasis.

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Myocardial Ischemia and Infarction Related to Recreational Cocaine Use

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ILLICIT USE OF COCAINE has been associated with toxic cardiovascular reactions including tachycardia, hypertension, ventricular arrhythmias and death.¹⁻⁴ We report the case of a patient in whom on separate occasions angina and a subendocardial myocardial infarction developed after intranasal application ("snorting") of cocaine.

Report of a Case

A 38-year-old healthy man was seen for routine medical care in October 1976. He had a 40-pack-year history of cigarette smoking. He said there was no personal or family history of myocardial infarction, hypertension, diabetes mellitus or hyperlipidemia. The patient was mildly overweight. His blood pressure was 120/80 mm of mercury and pulse rate was 68 per minute. On physical examination fundi were normal, pulses were full without bruits and there was no jugular venous distention. Cardiac examination was entirely normal as was the remainder of the physical examination. The results of all routine laboratory tests were within normal limits as were a random serum glucose test, thyroid function tests, chest roentgenogram and electrocardiogram.

In February 1977 the patient was admitted to hospital with dizziness and a feeling of heaviness in the left arm. A subendocardial anterolateral myocardial infarction was noted to be evolving on the electrocardiogram. The serum creatine phosphokinase level (CPK) was 310 IU per liter (normal, 2 to 83) with elevated MB bands. The

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